

CLAIMS

1. A method for facilitating supply chain  
2 collaboration in a network environment, said supply chain  
3 including an enterprise and at least one supplier, the  
4 method comprising:

5 generating and transmitting an unconstrained  
6 forecast to said at least one supplier;

7 receiving, from said at least one supplier, a  
8 supplier capability statement;

9 generating a constrained forecast using at least one  
10 supplier capability statement;

11 transmitting said constrained forecast to said at  
12 least one supplier; and

13 receiving, from said at least one supplier, a formal  
14 commitment to product a needed supply indicated in said  
15 constrained forecast.

1. The method of claim 1, wherein said generating  
2 said constrained forecast includes:

3 performing a squared set analysis upon said supplier  
4 capability statement; and

5 adding capacity constraints during said analysis.

1           3. The method of claim 1, wherein said generating  
2 and transmitting said unconstrained forecast to said at  
3 least one supplier includes receiving an aggregated  
4 demand from a group associated with said enterprise, said  
5 aggregated demand exploded into time-bucketed materials  
6 requirements for said group.

1           4. The method of claim 3 wherein said group  
2 includes a division of said enterprise which shares  
3 common materials requirements.

1           5. The method of claim 4 wherein said group is  
2 distributed among a plurality of site locations for said  
3 enterprise over said network environment.

1           6. The method of claim 3, wherein said supplier  
2 capability statement is transmitted to said group, said  
3 group associated with said at least one supplier.

1           7. The method of claim 3, wherein said supplier  
2 capability statement includes a greatest amount of  
3 materials said at least one supplier is able to make  
4 available to said group.

1           8. The method of claim 2, wherein said performing  
2 said squared set analysis includes feeding said supplier  
3 capability statement into a constraint-based optimization  
4 tool.

1           9. The method of claim 1, wherein said constrained  
2 forecast includes a demand for materials factoring in  
3 resource constraints.

1           10. The method of claim 8, wherein a squared set  
2 build plan is generated by said constraint-based  
3 optimization tool.

1           11. The method of claim 10, wherein said squared  
2 set build plan is fed to a materials resource planning  
3 engine and requirements for a squared set constrained  
4 forecast are generated, said requirements directed to a  
5 site location for said enterprise.

1           12. The method of claim 11, wherein said squared  
2 set constrained forecast is transmitted to said at least  
3 one supplier, said at least one supplier associated with  
4 said site location for said enterprise.

1           13. The method of claim 1, wherein said formal  
2 commitment includes an agreement by said at least one  
3 supplier to provide said needed supply to said  
4 enterprise.

1           14. The method of claim 1, further comprising:  
2                 monitoring inventory levels at a replenishment  
3                 service center by said at least one supplier based upon  
4                 said formal commitment;  
5                 refilling inventory items at said replenishment  
6                 service center according to said formal commitment;  
7                 facilitating delivery of said inventory items to  
8                 a site location for said enterprise by transmitting a  
9                 pull signal to said replenishment service center; and  
10                receiving said inventory items in response to  
11                said pull signal.

1           15. The method of claim 14, wherein said monitoring  
2                 said inventory levels at said replenishment service  
3                 center includes providing said site location for said  
4                 enterprise, said at least one supplier, and said  
5                 replenishment service center a visibility of said  
6                 inventory materials in transit.

1           16. The method of claim 14, wherein said monitoring  
2                 said inventory levels by said at least one supplier  
3                 includes maintaining a minimum supply level.

1           17. The method of claim 16, wherein said minimum  
2                 supply level is measured in days of supply at said  
3                 replenishment service center.

1           18. The method of claim 17, wherein said days of  
2 supply is calculated by rationalizing current units of  
3 inventory against expected consumption.

1           19. The method of claim 18, wherein said expected  
2 consumption represents said constrained forecast.

1           20. The method of claim 14, wherein said monitoring  
2 said inventory levels is performed by accessing an  
3 inventory status provided by said replenishment service  
4 center.

1           21. The method of claim 14, wherein said site  
2 location for said enterprise monitors said inventory  
3 levels.

1           22. The method of claim 14, wherein said refilling  
2 said inventory items includes:

3           providing an advance ship notice to said  
4 replenishment service center and said site location for  
5 said enterprise; and

6           updating a database to indicate when said inventory  
7 items are shipped.

1           23. The method of claim 14, wherein said  
2 transmitting said pull signal to said replenishment  
3 service center includes providing a pull request number  
4 to said replenishment service center requesting delivery  
5 of said inventory items, wherein a transfer order is  
6 generated at said replenishment service center in  
7 response to said pull signal.

1           24. The method of claim 23, wherein a goods issued  
2 document is created in response to preparing said  
3 inventory items for delivery, said goods issued document  
4 including said pull request number.

1           25. The method of claim 24, wherein a goods receipt  
2 is generated upon delivery of said inventory items, said  
3 goods receipt associated with said pull request number.

1           26. A storage medium encoded with machine-readable  
2 computer program code for facilitating supply chain  
3 collaboration in a network environment, said supply chain  
4 including an enterprise and at least one supplier, the  
5 storage medium including instructions for causing a  
6 computer to implement a method comprising:

7           generating and transmitting an unconstrained  
8 forecast to said at least one supplier;

9           receiving, from said at least one supplier, a  
10 supplier capability statement;

11           generating a constrained forecast using at least one  
12 supplier capability statement;

13           transmitting said constrained forecast to said at  
14 least one supplier; and

15           receiving, from said at least one supplier, a formal  
16 commitment to product a needed supply indicated in said  
17 constrained forecast.

1           27. The storage medium of claim 26, wherein said  
2 generating said constrained forecast includes:

3           performing a squared set analysis upon said supplier  
4 capability statement; and

5           adding capacity constraints during said analysis.

1           28. The storage medium of claim 26, wherein said  
2 generating and transmitting said unconstrained forecast  
3 to said at least one supplier includes receiving an  
4 aggregated demand from a group associated with said  
5 enterprise, said aggregated demand exploded into time-  
6 bucketed materials requirements for said group.

1           29. The storage medium of claim 28 wherein said  
2 group includes a division of said enterprise which shares  
3 common materials requirements.

1           30. The storage medium of claim 29 wherein said  
2 group is distributed among a plurality of site locations  
3 for said enterprise over said network environment.

1           31. The storage medium of claim 28, wherein said  
2 supplier capability statement is transmitted to said  
3 group, said group associated with said at least one  
4 supplier.

1           32. The storage medium of claim 28, wherein said  
2 supplier capability statement includes a greatest amount  
3 of materials said at least one supplier is able to make  
4 available to said group.

1           33. The storage medium of claim 27, wherein said  
2 performing said squared set analysis includes feeding  
3 said supplier capability statement into a constraint-  
4 based optimization tool.

1           34. The storage medium of claim 26, wherein said  
2 constrained forecast includes a demand for materials  
3 factoring in resource constraints.

1           35. The storage medium of claim 33, wherein a  
2 squared set build plan is generated by said constraint-  
3 based optimization tool.

1           36. The storage medium of claim 35, wherein said  
2 squared set build plan is fed to a materials resource  
3 planning engine and requirements for a squared set  
4 constrained forecast are generated, said requirements  
5 directed to a site location for said enterprise.

1           37. The storage medium of claim 36, wherein said  
2 squared set constrained forecast is transmitted to said  
3 at least one supplier, said at least one supplier  
4 associated with said site location for said enterprise.

1           38. The storage medium of claim 26, wherein said  
2 formal commitment includes an agreement by said at least  
3 one supplier to provide said needed supply to said  
4 enterprise.

5           39. The storage medium of claim 26, further  
6 comprising instructions for causing a computer to  
7 implement:

8           monitoring inventory levels at a replenishment  
9 service center by said at least one supplier based upon  
10 said formal commitment;

11           refilling inventory items at said replenishment  
12 service center according to said formal commitment;

13           facilitating delivery of said inventory items to a  
14 site location for said enterprise by transmitting a pull  
15 signal to said replenishment service center; and

16           receiving said inventory items in response to said  
17 pull signal.

1           40. The storage medium of claim 39, wherein said  
2 monitoring said inventory levels at said replenishment  
3 service center includes providing said site location for  
4 said enterprise, said at least one supplier, and said  
5 replenishment service center a visibility of said  
6 inventory materials in transit.

1           41. The storage medium of claim 39, wherein said  
2 monitoring said inventory levels by said at least one  
3 supplier includes maintaining a minimum supply level.

1           42. The storage medium of claim 41, wherein said  
2 minimum supply level is measured in days of supply at  
3 said replenishment service center.

1           43. The storage medium of claim 42, wherein said  
2 days of supply is calculated by rationalizing current  
3 units of inventory against expected consumption.

1           44. The storage medium of claim 43, wherein said  
2 expected consumption represents said constrained  
3 forecast.

1           45. The storage medium of claim 39, wherein said  
2 monitoring said inventory levels is performed by  
3 accessing an inventory status provided by said  
4 replenishment service center.

1           46. The storage medium of claim 39, wherein said  
2 site location for said enterprise monitors said inventory  
3 levels.

1           47. The storage medium of claim 39, wherein said  
2 refilling said inventory items includes:

3           providing an advance ship notice to said  
4 replenishment service center and said site location for  
5 said enterprise; and

6           updating a database to indicate when said inventory  
7 items are shipped.

1           48. The storage medium of claim 39, wherein said  
2 transmitting said pull signal to said replenishment  
3 service center includes providing a pull request number  
4 to said replenishment service center requesting delivery  
5 of said inventory items, wherein a transfer order is  
6 generated at said replenishment service center in  
7 response to said pull signal.

1           49. The storage medium of claim 48, wherein a goods  
2 issued document is created in response to preparing said  
3 inventory items for delivery, said goods issued document  
4 including said pull request number.

1           50. The storage medium of claim 49, wherein a goods  
2 receipt is generated upon delivery of said inventory  
3 items, said goods receipt associated with said pull  
4 request number.

A handwritten signature or mark consisting of stylized letters and symbols, possibly reading "add" or "add ap".